

## REMARKS

Reconsideration and further examination of the subject patent application is respectfully requested in view of the present Amendment, and the following Remarks. Claims 1-20 are currently pending in the application. Claims 1, 5-8, 13-15 and 18-19 have been rejected under U.S.C. §103(a) as being unpatentable over U.S. Pat. Application Publication No. 2002/0035474 to Alpdemir in view of Gorin, et al, "How May I Help You?", October 1996, AT&T Research ("Gorin"). Claims 2, 9 and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Alpdemir in view of Gorin further in view of Gavan et al. (U.S. Pat. No. 6,601,048) and further in view of Dezonno (U.S. Pat. No. 6,233,333), and claims 3, 10-11, 17 and 20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Alpdemir in view of Gorin further in view of Saylor et al. (U.S. Pat. No. 6,792,086). Claim 4 has been rejected as unpatentable over Alpdemir in view of Gorin further in view of U.S. Pat. No. 6,349,290 to Horowitz, et al. ("Horowitz"), and claim 12 has been rejected as unpatentable over Alpdemir in view of Gorin further in view of Saylor and further in view of U.S. Pat. Pub. No. 2003/0084010 to Bigus, et al. ("Bigus"). Claims 1, 2, 8, 9, 15, 16, and 20 have been amended for clarification. After careful review of the claims and references, applicant believes that the claims are in allowable form and therefore a Notice of Allowance is respectfully requested.

The independent claims 1, 8, and 15 as well as dependent claims 5-7, 12-14, 18, and 19 have been rejected as anticipated by Alpdemir. Claims 1, 8, 15, and 20 have been amended to clarify that the AI engine incorporates the expertise of a live agent (see e.g., p. 7, lines 9-13) and implements second order logic (see e.g., p. 6, last paragraph). Alpdemir discloses a system using voice recognition for menu based database retrieval over the telephone. Thus it does not use an AI engine to form natural language answers or simulate a conversation without use of menu selection. The Office Action has indicated that Alpdemir discloses use of an artificial intelligence engine to process and answer queries. However, Alpdemir does not disclose the use of an artificial intelligence engine for forming answers to queries from callers as claimed. The citation to Alpdemir pointed out by the Office Action (Paragraph 0141) does not provide a disclosure of the

claimed use of an artificial intelligence engine to answer the call center queries at all. Instead, it states in the first sentence of the paragraph, “Embodiments of the inventive system may desirably incorporate and utilize natural language speech recognition.” (para, 0141, lines 2-3) Thus, the paragraph is directed to speech recognition not AI generation of answers to queries. The last sentence (lines 7-9) merely adds the simple statement that artificial intelligence is known in the art and not described. This statement that AI is known is not a statement that it is used or a description of how it may be used. The sentence goes on to say that there will be no description of artificial intelligence. (See Alpdemir para [0141], line 8-9”... and artificial intelligence are known in the art and not described in greater detail here”). Clearly, a mere mention of the existence of AI and a statement that it will not be described is not an enabling disclosure of how it is used to answer queries when the system described is a database retrieval system using menus and prompts (e.g., paragraph 090, 0138, 0144).

The Office Action suggests that the reference to AI in Alpdemir must be read within the context of the invention. However, it is not a question of taking this statement outside a given context, but of reading what is actually disclosed. The statement about AI is no more than an observation that AI is known, it does not state that it should be used or how it should be used or what it should be used for, such unstated use is merely being assumed in the Office Action. Further, the context of the entire paragraph describes use of natural language speech recognition to extract requests or inquiries (“...the system interprets the user’s speech to extract the request or inquiry.” Para. 0141, lines 3-5). The most that can be assumed within this context is that the AI is suggested to extract the requests, but the reference does not describe or suggest anything related to the claimed use of AI to form answers to the queries. There is not basis for assuming a completely unstated and undisclosed context. The entire paragraph concerns only speech recognition not creation of answers to queries. Thus, even if the description of use of speech recognition to extract requests is assumed to include AI, there is still no disclosure of use of AI to form answers to queries about the activities of the organization as claimed. Regarding the Office Action reference to the context of the invention, Alpdemir describes a database system data retrieved which permits data retrieval from the database through voice commands wherein voice commands are converted to text and used to retrieve the data (paragraphs 0138, 144). There is no use of AI to form answers to

questions taught or suggested, nor is AI in this simple data base retrieval context suggested. Cited paragraph 088-091 describes use of prompts and a menu to access directory assistance which is a mere data retrieval function devoid of any suggestion of use of AI to form natural language answers to questions. In fact, Alpdemir teaches away from the claimed invention because while expressly recognizing the existence of AI, it fails to suggest its use to answer questions and instead teaches use of traditional menu presentation and selection to accomplish traditional data retrieval from a database. Thus, there is absolutely no enabling disclosure of using AI to form natural language answers and enable natural language conversational exchanges with the caller. At most, there is a non-enabling hint that AI could be used in the speech recognition discussed in paragraph 0141.

In addition, independent claims 1, 15, and 20 also call for an artificial intelligence engine with a knowledge universe comprising enterprise activities of the organization. This is also not disclosed by Alpdemir. The Office Action cites passages describing that queries can pertain to activities of the business. However, these passages do not describe the knowledge universe of an AI engine and do not limit such knowledge base to the claimed enterprise activities. Rather, they refer only to data types that may be asked for (implying some of the data that is in the database) but this is unrelated to the knowledge universe of an AI engine (which is not present in Alpdemir).

Similarly, Gorin does not teach the use of artificial intelligence to determine natural language answers. Gorin concerns automatic routing, and uses natural language recognition to determine the call type for call routing and “Such a call router need not solve the user’s problem.” (p. 1, Col. 1, third paragraph). Gorin does not mention use of an artificial intelligence engine. Thus, it does not teach use of artificial intelligence to simulate a natural language conversation, and does not use or have a need to use the expertise of a live agent or implement AI logic. It merely tries to recognize one of 14 predetermined service requests (p. 3, Col. 1, first paragraph). Thus, neither reference teaches the claimed use of AI, incorporating the expertise of a live agent, or implementing of second order logic. There is no need to implement these AI features in systems which do not use AI. Neither reference teaches or attempts to use agent expertise or AI logic because they either use menus (Alpdemir) or are concerned with routing (a pre-agent activity).

Claims 7 and 8 limit the knowledge universe to only enterprise activities which is also not disclosed by the cited references. Claims 16 and 20 also further limit the knowledge universe to call records for forming a context for processing the call, and to agenda of the organization to provide subjective answers focused on the organization. As described, in the specification (e.g., p. 8, para 4) this limited universe provides unique advantages, and is not disclosed in Alpdemir or Gorin which do not describe use of this limited universe in an AI engine or in fact, any implementation of an artificial intelligence engine to form answers to inquiries. Thus, the independent claims 1, 8, 15, and 20 distinguish over Alpdemir and Gorin for at least the above reasons, and are therefore believed to be allowable. Further, the dependent claims 2-7, 9-14, and 16-19 are similarly believed to be allowable at least because they depend from allowable claims 1, 18, and 15.

Claims 2, 9, and 16 have been rejected as obvious over Alpdemir and Gorin in view of Gavan et al. (“Gavan”) and Dezonno. As discussed above, Alpdemir and Gorin do not teach use of an artificial intelligence engine to form answers to caller queries, and neither does Gavan. Gavan discloses a system for processing event records and uses an AI engine for pattern recognition in the records for detecting fraud. Thus, while Gavan teaches detection of patterns in event records, it does not teach or suggest use of artificial intelligence to answer queries from callers about the enterprise activities as claimed. Thus, none of the references disclose this feature. Claims 2, 9, and 16 also now call for the AI engine to draw inferences from call records to form answers which is also not taught by the cited references (see e.g., p. 8, lines 20-23). Further, claim 2 calls for delivery of call records and a second call to the artificial intelligence engine at substantially the same time. Claim 2 has been further rejected as obvious over Alpdemir, Gorin, and Gavan and further in view of Dezonno. The Office Action asserts that Dezonno disclosed identifying a call record to be delivered from one ACD to another ACD and that the call record and call are delivered simultaneously at Col. 7, lines 30-44. However, Dezonno delivers the call to the agent 18C and the records to a terminal display 22C. Thus, they are delivered to two different destinations, not to a single engine or location (i.e., the artificial intelligence engine). Gavan merely teaches use of multiple items. Thus, neither reference teaches delivery of a call and call records to the same location, or to an AI engine. Thus, claim 2, which is dependent upon allowable claim 1,

is believed to be further distinguishable over any combination of the cited references. This feature is also not taught or suggested by Alpdemir, Gorin, Gavan, or Dezonno.

In addition, claims 2, 9, and 16 call for use of call records to form a context for forming answers to the caller queries. Alpdemir and Gorin do not disclose an AI engine forming a context for answering queries or for drawing inferences. The Office Action refers to paragraph 0091 which clearly does not describe an AI engine but instead describes traditional data retrieval using the name and location. There is no AI engine described in Gorin, and no mention of drawing inferences on AI engine. There is no AI engine, no AI function and no AI context described. In fact, the opposite is taught by Alpdemir and Gorin, simply traditional data retrieval and speech recognition. Gavan, concerned with the entirely different issue of looking for fraud patterns in event records, also fails to teach or suggest this feature. This use of artificial intelligence on call records to detect fraud patterns is entirely different from using it to generate context for answers to caller questions about the enterprise activities. Dezonno discloses identifying a call record but does not disclose using the call record to form a context for an AI engine to form answers. Thus, neither Alpdemir, Gorin, Gavan, nor Dezonno disclose the claimed feature of using the call records to draw inferences to form the context in an AI engine for forming answers to the caller queries. Accordingly, claims 2, 9, and 16 are believed to be distinguishable over the combination of Alpdemir, Gorin, Gavan, or Dezonno.

Claims 3, 10-11, 17, and 20 have been rejected as obvious over Alpdemir and Gorin further in view of Saylor. Saylor describes using voice codes to store content which is accessible by telephone but fails to disclose use of an artificial intelligence engine to form answers to caller queries or use of the claimed specifically limited knowledge universe or enabling generalizing otherwise indeterminate questions (see e.g., p. 8). Thus, none of the cited references teach these features, and the claims 3-4, 10-11, 17, and 20 are therefore distinguishable over the combination. Claim 17 calls for the AI engine to use information from web page documents to form answers in VXML and incorporating VXML responses into documents delivered to the caller in response to the call (see e.g., p. 8, first paragraph). This feature is also not taught by the cited references.

Claim 16 is believed to be allowable because it depends from allowable claim 15 and further because none of the references disclose limiting the knowledge universe for forming a context and wherein the AI engine generalizes questions.

Further claim 4 calls for an AI engine that duplicates prior successful conversation strategies and mimicing a live agent (see e.g., p. 9, first paragraph), and claim 11 calls for an AI engine that is not objectively accurate in responding to queries (see e.g., p. 9, paragraph 2). These features are also believed to not be disclosed in the context of a call processing AI system simulating a natural language conversation.

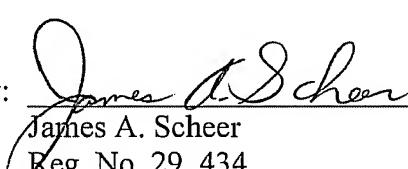
As discussed above, all pending claims 1-20 claim features which are not disclosed in any of the cited references. Therefore, claims 1-20 are believed to be allowable over any combination of the cited references.

For the foregoing reasons, applicant submits that the subject application is in condition for allowance and earnestly solicits a Notice of Allowance. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, the Examiner is respectfully requested to call the undersigned at the below-listed number.

Respectfully submitted,

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